

REMARKS

The Office Action dated December 2, 2004 has been carefully considered. Claims 17-38 are pending in the present Application. The above amendments and the following remarks are presented in a sincere attempt to place this Application in condition for allowance. Claims 1-16 and 39-46 have been withdrawn from consideration. Claims 21 and 30 have been amended in this Response. Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

An interview was held with the Examiner, Mr. Jeff W. Natalini, on December 21, 2004, to discuss the rejections under 35 U.S.C. §§ 102(e), 103(a) and the proposed amendments thereto. Applicants wish to thank the Examiner for the courtesies extended.

The drawings stand objected to under 37 C.F.R. § 1.83(a). Specifically, the “N resistors coupled in series between the supply voltage and ground” of Claim 30, must be shown or the feature cancelled from the Claims. Insofar as this objection may be applied against the amended claims, it is deemed overcome.

Claim 30 has been amended to read, “N resistors coupled in series between the supply voltage and ground or the supply voltage and a lower reference voltage.” Because the pad 1206 in figure 12 can be grounded or contain a voltage, Claim 30 has been amended to describe this feature. Accordingly, Applicants respectfully request that the objection to the drawings under 37 C.F.R. § 1.83(a) be withdrawn.

Claims 17-21 stand rejected under 35 U.S.C. § 102(e) in view of U.S. Patent 6,597,249 to Chien et al. (“Chien”). Insofar as these rejections may be applied against the amended claims, they are deemed overcome.

The Chien reference does not suggest, teach, or disclose “measuring the output frequencies of the Voltage Controlled Oscillator (“VCO”) as a function of the test input voltages,” as recited in Claim 17. Specifically, Chien discloses the fine tuning of the VCO by matching the Phase Lock Loop’s (“PLL”) frequency to a finite reference frequency. The present invention applies a number of test voltages to the VCO to determine the output frequency of the VCO in response to the test voltages. This process does not involve fine tuning the VCO, but determining its lock and capture range by applying test voltages. Therefore, the frequency output specifics of the VCO can be determined through a set of tests. This feature of the present invention is not disclosed in the Chien reference.

In view of the foregoing, it is apparent that the cited reference does not disclose, teach, or suggest the unique combination recited in Claim 17. Applicants therefore submit that Claim 17 is both clearly and precisely distinguishable over the cited reference in a patentable sense, and is therefore allowable over the cited reference. Accordingly, Applicants respectfully request that the rejection of Claim 17 under 35 U.S.C. § 102(e) in view of Chien be withdrawn and that Claim 17 be allowed.

Claims 18-20 depend upon and further limit Claim 17. Hence, for at least the aforementioned reasons, these Claims are deemed to be in condition for allowance. Applicants respectfully request that the rejection of dependent Claims 18-20 also be withdrawn.

Claim 21 has been amended to include a distinguishing feature of the present invention. The limitation, “a frequency measuring module for measuring VCO output frequency via the at least one divider and test clock outputs” has been added to Claim 21. Support for this Amendment can be found, among other places, page 10, lines 12-16, of the original Application.

The Chien does not suggest, teach, or disclose measuring the VCO output frequency as a function of the test voltages. Specifically, Chien discloses the fine tuning of the VCO by matching the Phase Lock Loop's ("PLL") frequency to a finite reference frequency. The present invention applies a number of test voltages to the VCO to determine the output frequency of the VCO in response to the test voltages. This process does not involve fine tuning the VCO, but determining its lock and capture range by applying test voltages. Therefore, the frequency output specifics of the VCO can be determined by measuring the output frequency through the use of dividers and test clock outputs. This feature of the present invention is not disclosed in the Chien reference.

In view of the foregoing, it is apparent that the cited reference does not disclose, teach, or suggest the unique combination recited in Claim 21. Applicants therefore submit that Claim 21 is both clearly and precisely distinguishable over the cited reference in a patentable sense, and is therefore allowable over the cited reference. Accordingly, Applicants respectfully request that the rejection of Claim 21 under 35 U.S.C. § 102(e) in view of Chien be withdrawn and that Claim 21 be allowed.

Claims 22-24 stand rejected under 35 U.S.C. § 103(a) in view of Chien and Patent Pub. 2003/0071748 to Huang et al. ("Huang"). Insofar as these rejections may be applied against the amended claims, they are deemed overcome.

Claims 22-24 depend upon and further limit Claim 21. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Applicants respectfully request that the rejection of dependent Claims 22-24 also be withdrawn.

Claims 25-28 stand rejected under 35 U.S.C. § 103(a) in view of Chien, Huang, and U.S. Patent 6,492,798 to Sunter ("Sunter"). Insofar as these rejections may be applied against the amended claims, they are deemed overcome.

Claims 25-28 indirectly depend upon and further limit Claim 21. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Applicants respectfully request that the rejection of dependent Claims 25-28 also be withdrawn.

Claims 29-32 stand rejected under 35 U.S.C. § 103(a) in view of Chien and Huang. Insofar as these rejections may be applied against the amended claims, they are deemed overcome.

Claims 29-32 indirectly depend upon and further limit Claim 21. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Applicants respectfully request that the rejection of dependent Claims 29-32 also be withdrawn.

Claims 33-36 stand rejected under 35 U.S.C. § 103(a) in view of Chien, Huang, and Sunter. Insofar as these rejections may be applied against the amended claims, they are deemed overcome.

Claims 33-36 indirectly depend upon and further limit Claim 21. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Applicants respectfully request that the rejection of dependent Claims 33-36 also be withdrawn.

Claim 37 stands rejected under 35 U.S.C. § 103(a) in view of Chien and Huang. Insofar as this rejection may be applied against the amended claims, it is deemed overcome.

Claim 37 indirectly depends upon and further limits Claim 21. Hence, for at least the aforementioned reasons, this Claim should be deemed to be in condition for allowance. Applicants respectfully request that the rejection of dependent Claim 37 also be withdrawn.

Claim 38 stands rejected under 35 U.S.C. § 103(a) in view of Chien, Huang, and U.S. Patent 4,851,712 to Imai et al. Insofar as this rejection may be applied against the amended claims, it is deemed overcome.

Claim 38 indirectly depends upon and further limits Claim 21. Hence, for at least the aforementioned reasons, this Claim should be deemed to be in condition for allowance. Applicants respectfully request that the rejection of dependent Claim 38 also be withdrawn.

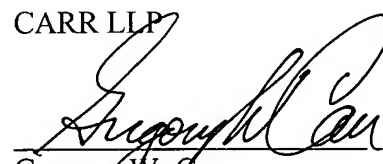
Applicants have now made an earnest attempt to place this Application in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request full allowance of Claims 17-38.

Applicants do not believe that any fees are due; however, in the event that any fees are due, the Commissioner is hereby authorized to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 50-0605 of CARR LLP.

Should the Examiner deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

CARR LLP


Gregory W. Carr
Reg. No. 31,093

Dated: 1/17/05
CARR LLP
670 Founders Square
900 Jackson Street
Dallas, Texas 75202
Telephone: (214) 760-3030
Fax: (214) 760-3003